Docket No. 00-0579
ICC Staff Exhibit 2.0

DIRECT TESTIMONY

OF

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ECONOMIST

ENERGY DIVISION—POLICY SECTION

ILLINOIS COMMERCE COMMISSION

Central Illinois Light Company

Docket No. 00-0579

November 13, 2000

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1. Witness Qualifications

Q. State your name and business address.

A. Roger Christ, Illinois Commerce Commission, 527 East Capitol Avenue, Springfield, Illinois, 62701.

Q. By whom are you employed and in what capacity?

A. I am employed as an Economist in the Illinois Commerce Commission's Energy Division—Policy Section.

Q. What are your responsibilities within the Energy Division—Policy Section?

A. I am to provide economic analyses and advise the Commission and other staff members on issues involving the gas and electric utility industries. I am to review tariff filings and make recommendations to the Commission concerning those filings. I am to provide testimony in Commission proceedings. In selected cases, I am to sometimes act as an assistant to the Commission or to hearing examiners.

Q. State your educational background.

A. I graduated from the Knox College in Galesburg, Illinois, in 1966 with a Bachelor of Arts degree in economics and business administration. I obtained a Masters of Science degree in economics from Southern Illinois University at Carbondale. By 1973, I had completed all work toward a doctorate in economics from SIU, except the written dissertation and its defense. In addition from 1975 to 1985, I also completed courses in mathematics, statistics, and computer science from University of Illinois at Springfield.

Q. Describe your professional experience.

A. I have been employed as an Economist in the Illinois Commerce Commission's Energy Division—Policy Section since April 2000. From May 1994 to February 2000, I was a Commissioner's Executive Assistant at the Illinois Commerce Commission. From February 1974 to May 1994, I was an economic analyst with the Illinois Bureau of the Budget, where I monitored and projected Illinois economic trends and State tax revenues, and I also performed Illinois economic and State tax revenue impact analyses. While in graduate school at Southern Illinois University at Carbondale, I taught business statistics and principles of economics. From August 1966 to August 1968, I was on active duty in the U.S. Air Force working in accounting and finance.

Q. Have you given testimony before?

A. Yes. I provided direct and rebuttal testimony in consolidated Dockets 00-0259, 00-0395, 00-0461.

2. Purpose of Testimony

Q. What is the purpose of your testimony?

A. The testimony reviews a portion of Central Illinois Light Company's ("CILCO's") proposal to eliminate its Electric Fuel Adjustment Clause ("EFAC") and to add power supply costs to base rates. In particular, I review CILCO's projected prices of purchased power needed in excess of power supplied by CILCO's generation assets and by CIPS under a purchased power contract.

Since I find that CILCO's projected purchased power prices for July and August 2000 are much higher than the spot prices of these two months, I

recommend an alternative set of projected prices based on spot prices for July, August, September, and October 2000 and forward on-peak prices for the period from November 2000 to September 2001. I recommend forward on-peak prices, instead of future on-peak prices as proposed by CILCO. While there is little (numerical) difference between the forward on-peak prices and the future on-peak prices in the months and markets examined, there is trading in forward contracts but no current trading in future contracts

For the period analyzed by CILCO, the effect of my recommendations is to *decrease* the average price of CILCO's extra purchased power; the change is -$8.94 per mWh, or -15.7%. (ICC Staff Ex. 2.0, Schedule 1, p. 6)

3. Central Illinois Light Company's Proposal

Q. In general what is Central Illinois Light Company's proposal?

A. Central Illinois Light Company ("CILCO") is proposing to eliminate its EFAC and to add power supply costs to base rates, pursuant to the provisions of Section 9-220(d) of the Public Utilities ("PUA"), as added by P.A. 90-561. Instead of revising and re-filing each of its electric rates to incorporate the power supply costs into the base rates, CILCO has proposed to implement the elimination of its EFAC by filing modifications to its EFAC. CILCO proposes to set its fuel adjustment charge ("FAC") equal to 1.255 cents per kWh. For the purposes of Section 9-220(d), CILCO proposes that the FAC be considered a base rate component. The FAC of 1.255 cents will be charged separately for each kWh billed during any monthly billing period. Currently, CILCO recovers base fuel cost of 0.769 cents per kWh and will continue to do so under CILCO's proposal.

CILCO filed tariff sheets on July 31, 2000 to effect its proposal. The Commission suspended the filing on August 29, 2000.

Q. What role does the Commission have in this proceeding?

A. Under Section 9-220(d) of the PUA, the Commission shall review and shall by order approve, or approve as modified in the Commission's order, the proposed tariff sheets within 240 days after the date of the filing.

Q. By what criteria shall the Commission review and approve the proposal?

A. The Commission's order shall approve rates and charges that the Commission finds will recover the reasonable, prudent, and necessary power supply costs incurred or to be incurred by the utility during the 12 month period found by the Commission to be appropriate, provided that such period shall be either (1) a 12 month historical period occurring during the 15 months ending on the date of the utility's filing, or (2) a 12 month future period ending no later than 15 months following the date of the utility's filing. A utility is required to include with its filing information showing both (1) its actual power supply costs for a 12 month period within the required historical 15 months and (2) its projected power supply costs for a 12 month period within the required future 15 months.

Q. Does CILCO's filing include the latter requisite information?

A. Yes, in part. The date of the informational filing was July 31, 2000. In my lay opinion, the required historical 15 month period is (in whole or complete months) from and including May 1999 to and including July 2000. CILCO presented its power supply costs for the four over-lapping 12 month periods of

April 1999 to March 2000, May 1999 to April 2000, June 1999 to May 2000, and July 1999 to June 2000. It is reasonable to interpret the required 12 month period as continuous periods. Therefore all 12 month periods but the first period (from April 1999 to March 2000) satisfy the informational requirement.

In my lay opinion, the required future 15 month period is (in whole or complete months) from and including August 2000 to and including October 2001. CILCO presented its power supply costs for the four over-lapping 12 month periods of July 2000 to June 2001, August 2000 to July 2001, September 2000 to August 2001, and October 2000 to September 2001. Therefore all 12 month periods but the first period (from July 2000 to June 2001) satisfy the informational requirement.

Q. What 12 month period has CILCO elected to use to determine its power supply cost of 1.255 cents per kWh?

A. CILCO has elected to use the future 12 month period beginning September 1, 2000 and terminating August 31, 2001.

Q. How does the future power supply cost of 1.255 cents per kWh compare to the power supply costs for four historical 12-month-periods for which CILCO presented power supply costs?

A. The 1.255 cents per mWh is higher than the historical power supply costs in two of the four historical 12-month-periods analyzed by CILCO. The power supply costs are 1.176 cents per mWh, 1.204 cents per mWh, 1.270 cents per mWh, and 1.297 cents per mWh for the four historical 12-month-periods. (CILCO Ex. 1.1, Schedule 4)

Q. How does the future power supply cost of 1.255 cents per kWh compare to the power supply costs for the other future three 12-month-periods for which CILCO presented power supply costs?

A. The 1.255 cents per mWh is higher than the future power supply costs in the other three future 12-month-periods analyzed by CILCO. (CILCO "Confidential" information filed with ICC Clerk's Office on July 31, 2000, "Forecasted July 2000 - September 2001 FAC Summary")

4. Evaluation of Central Illinois Light Company's Projected Power Prices

4.1. Central Illinois Light Company's Projected Power Prices

Q. Does your evaluation of CILCO purchased power prices exclude purchased power prices for October 2001 and include purchased power prices for July 2000?

A. Yes. The October 2001 purchased power price is excluded because CILCO provided none of the other data for October 2001 necessary to estimate the costs of power to be supplied in October 2001, and therefore it is pointless to include just a fragment of the necessary data.

On the other hand, CILCO does provide all of the other data for July 2000 necessary to estimate the costs of power to be supplied in July 2000; therefore I include a recommended purchased power price for July 2000 for purposes of making possible cost comparisons.

Q. What aspect of Central Illinois Light Company's proposal are you examining?

A. I examine projected prices of projected future purchases of electric power that is needed by CILCO in excess of power supplied by CILCO generation assets and by CIPS under a purchased power contract. CILCO assumed that the additional energy

> was purchased at the average NYMEX-CINERGY electricity forward curve. CILCO used the 6/20/00 electricity CINERGY forward curve for the period July 2000 through December 2001. This forward curve was deflated by 5% to arrive at a forward curve extending through December 2005. While there may be a slight variance between energy purchased at the CINERGY "hub" and the MAIN market in which CILCO purchases the majority of its energy requirements, the CINERGY forward prices have been a good indication of the price at which suppliers are willing to sell energy within the MAIN on a forward basis. (CILCO Ex. 4.0, pp. 3-4)

Q. Were you able to verify the Cinergy prices of the "forward curve" used as price projections by CILCO witness Ferlmann?

A. Yes, but subject to some clarification. I believe that CILCO witness Ferlmann actually used NYMEX Cinergy on-peak future prices rather than Cinergy forward prices. According to the Power Markets Week Price Index Database in Excel ("PMW"), November 2000 release, the Cinergy prices he used are identical to the Cinergy future on-peak prices (not forward prices as indicated by CILCO witness Ferlmann) for transactions on June 19, 2000 (not on June 20, 2000 as indicated by CILCO witness Ferlmann). The "forward curve" is the set of future prices he used; the "forward curve" he used is not composed of forward prices.

Q. What are the similarities and differences of future and forward markets?

A. Each future market transaction has two associated dates that specify the future price: one date is the future month of electricity delivery (the contract month); the other date is the trading day or transaction day on which the price was established, usually by a trade or a written contract (the transaction date). Furthermore, because future contracts are traded on exchanges, the contracts are standardized by the exchanges with respect to what is delivered where. The standardized NYMEX Cinergy contract is for 736 megawatts hours delivered over a monthly period into the Cinergy Transmission System at any interface designated by the seller. (Since PMW records these future prices as on-peak prices, presumably the power is to be delivered during on-peak hours.)

Each forward market transaction has two associated dates that specify the forward price: one date is the future month or date of electricity delivery (contract month or date); the other date is the trading day or transaction day on which the price was established, usually by a trade or a written contract (the transaction date). The contracts are the result of bilateral negotiations between the buyer and the seller. The monthly forward markets represent over-the-counter trades for on-peak, off-peak, or around-the-clock power transacted for the entire month, unless otherwise stated. For purposes of this testimony, I deal only with on-peak power, and the forward market data I use are from PMW, November 2000 release.

4.2. Cinergy Prices for Electric Power

Q. How are Cinergy future (settlement) prices established that compose the forward curve?

A. According to NYNEX's website, under normal circumstances when there are written contracts or trades, the NYMEX Exchange settlement committee establishes a settlement price, one for each future month of electricity delivery, at the close of each trading day session as the official price to be used in determining net gains and losses, margin requirements and the next day's prices limits. There are 18 consecutive trading months for which a contract can be written, each with a settlement price.

The term "settlement price" is often used as an approximate equivalent to the term "closing price." The close in futures trading refers to a brief period at the end of the day, during which transactions frequently take place quickly and at a range of prices immediately before the bell ending trading. Therefore, there frequently is no one closing price, but a range of prices. The settlement price is derived by calculating the weighted average of prices during that period. For purposes of this testimony, future prices shall mean settlement prices.

Q. How active is the NYMEX Cinergy future market for electricity?

A. In June 2000, there were some outstanding contracts written before then. However, during the months of June, July, August, September, and October 2000, no future contracts were written. (ICC Staff Ex. 2.0, Schedule 2, pp. 1 and 3) Settlement prices changed during these months, even for contract months for which there no were written contracts. I do not know how the settlement committee derives settlement prices when there are no trades.

Q. How are Cinergy forward on-peak prices established?

Forward prices reported by PMW represent the lowest and highest negotiated deals on a given transaction day. For purposes of this testimony I estimated Cinergy forward on-peak prices on each transaction day for each future month of delivery of electricity by averaging that day's high contract on-peak price and the low contract on-peak price (when contracts were written), and I averaged that day's bid/ ask quotes (when no contracts were written). With respect to forward contracts for delivery of electricity in a quarterly period, or a three month period, I assigned the quarterly price to each of the three months in the quarter. Forward contracts for delivery of electricity for more than a quarter were ignored. I then averaged the forward prices across transaction day within a transaction month in order to get forward prices by transaction month and contract month.

Q. How active is the Cinergy forward market for electricity?

A. There were at least 157 forward contracts written during June 2000; in addition, on 20 days when no forward contracts were written, bid/ask quotes were used to establish prices for forward contracts. Furthermore during October 2000, forward prices were established by at least 248 trades or written contracts; there were only 5 days when no forward contracts were written and bid/ask quotes were used to establish prices for forward contracts. (ICC Staff Ex. 2.0, Schedule 2, pp. 2 and 4)

Q. How do Cinergy future and forward prices compare numerically?

A. They are similar. For the period from July 2000 to September 2001, the average price difference for prices established in the transaction month of June 2000 is -$0.86 per mWh, or -1.2% (forward prices are below future prices).

Furthermore, for daily transactions in the transaction months of June 1999 and 2000, the correlation of forward and future prices is 0.969, and forward prices are about 95.6% of future prices. (The correlation coefficient measures how closely the prices move together, with a value of "1" indicating perfect co-movement and a value of "0" indicating no relationship.) (ICC Staff Ex. 2.0, Schedule 1, p. 1)

For the period from November 2000 to September 2001, the average price difference for prices established in the transaction month of October 2000 is only $0.24, or 0.5% (forward prices are above future prices). Furthermore, for daily transactions in the transaction months of October 1998, 1999, and 2000, the correlation of forward and future prices is 0.999, and forward prices are about 99.8% of future prices. (ICC Staff Ex. 2.0, Schedule 1, p. 2)

(Since future prices are close to forward prices and since there have been no trades in future contracts recently, one can speculate that the settlement committee may have used forward prices to administratively determine future prices.)

4.3. Cinergy Prices for Electric Power as Used by CILCO

Q. **Did CILCO witness Ferlmann use Cinergy future prices as direct inputs into the determination of power supply costs?**

A. No. He subjected them to a procedure of deflating and averaging. First, he began with the 18 months of Cinergy future prices from July 2000 to December 2001. Second, he multiplied the future price for each month of 2001 by 95% in order to project a price for each month of 2002, and then he multiplied the projected price for each month of 2002 by 95% in order to project the price for

each month of 2003. He repeated multiplying each month by 95% until 2005, thus generating a set of projected prices for each month from January 2002 to December 2005. Third, he averaged the Cinergy future prices with which he had started and the projected prices from 2002 to 2005; he calculated the averages by month across years, so that he finished with 12 monthly prices from January to December with no year specified. (CILCO Ex. 4.1)

Q. Did CILCO witness Ferlmann provide any explanation to support the successive rounds of deflating prior year prices before calculating an average for each month?

A. No. I can think of no economic reason for the arbitrary, uniform 5% annual decline he is projecting for power prices during 2002, 2003, 2004, and 2005. Furthermore in my lay opinion, these years are also outside the 15 month period required by Section 9-220(d) of the PUA.

His procedure results in a set of prices below the NYMEX Cinergy future prices of June 19th with which he started, such that the average price change is -$9.75, or -14.6%. (ICC Staff Ex. 2.0,Schedule 1, p. 5)

Q. CILCO witness Ferlmann projected prices for 12 months. What prices for electric power did CILCO then present or recommend in order to project the cost of power for the future 15 month period from July 2000 to September 2001?

A. CILCO assigned the average July price to July 2000, the average August price to August 2000, etc., until it finally assigned the average June price to June 2001. Then it started to repeat the cycle by assigning the average July price to

July 2001, by assigning the average August price to August 2001, and by assigning the average September price to September 2001. (CILCO "Confidential" information filed with ICC Clerk's Office on July 31, 2000, "Forecasted July 2000 - September 2001 FAC," p. 3)

Q. Did CILCO provide an explanation for this cycling of future prices?

A. No. It is just another turn in the inexplicable, convoluted procedure CILCO used to project market-based, purchased power prices.

5. Recommendations

Q. Please summarize your principal recommendation?

A. I recommend that the Commission reject CILCO's unjustified projections of purchased power prices for delivery of electricity during the future 15 month period analyzed by CILCO. In order to project the future costs of that part of CILCO's future power supply that includes purchases of electric power (needed in excess of power supplied by CIPS under a purchased power contract) for the 15 month period from July 2000 to September 2001, I recommend that CILCO use actual Cinergy spot prices for July, August, September, and October 2000 and Cinergy forward on-peak prices, established by trades during October 2000, for the period from November 2000 to September 2001. (See ICC Staff Ex. 2.0, Schedule 1, p. 7, for these recommended prices.)

Q. What are spot prices?

A. As reported by PMW, the spot market for on-peak electric power is a bilateral, over-the-counter market like the forward market for on-peak power except that electric power is for next-day delivery, and spot prices are the weighted

average of prices for actual, reported transactions or trades (not just the average of low and high prices).

Q. Why do you recommend that the Commission reject CILCO's convoluted projections of purchased power prices for delivery of electric power during the future 15 month period?

A. There are three reasons. First, CILCO provided no reasons to support or to explain its projection procedure.

Second, because CILCO averages include deflated future prices for 2002, 2003, 2004, and 2005, CILCO is not projecting prices of power for a future period ending no later than 15 months following the date of the utility's filing. Furthermore, CILCO's average prices for November and December include (un-deflated) future prices for November and December 2001, which are also outside the required 15 month period. Therefore in my lay opinion, CILCO's procedure does not meet the requirements of Section 9-220(d) of the PUA. CILCO is implicitly estimating its future power supply costs for a period outside the required 15 month period.

Third, CILCO's projections of the future purchased power prices for the months of July 2000 and August 2000 are much too high compared to the actual Cinergy spot prices for the same months. (For September 2000 and October 2000, there are approximate offsetting differences.) The CILCO projections are $134.38 per mWh for July and $107.63 per mWh for August while the Cinergy spot prices were $38.75 per mWh and $46.40 per mWh, respectively. (CILCO Ex. 4.1; ICC Staff Ex. 2.0, Schedule 1, p. 3 or 4) It is reasonable from a policy

viewpoint to reject CILCO's inaccurate projected prices and to replace them with a better set of prices, if available, because ratepayers will otherwise end-up paying CILCO's inaccurate, inflated power supply costs. Furthermore, I am unaware of any legal requirement that the Commission must accept CILCO's price projections if some projected prices are demonstrated to be inaccurate and if a better set of prices is available.

Q. Why do you recommend your set of purchased power prices for the future 15 month period?

A. Unless there is evidence to the contrary, I agree with CILCO's initial premise that projected purchased power prices for the future 15 month period should be determined by Cinergy future/forward markets. I believe that my recommended prices better reflect market-determined prices than CILCO's projected prices. There are four reasons.

First, the monthly prices that I recommend are obtained in a straightforward manner from Cinergy spot and forward markets for electricity. I averaged forward prices or bid/ask quotations on transaction days and then averaged the resulting forward prices across transaction days within a month, not across years and without deflating prices by some arbitrary factor, in order to get forward prices by transaction month and contract month.

Second, the Cinergy spot and forward prices that I recommend are established by active markets while the Cinergy future market currently has no active trading (settlement prices are somehow determined by a NYMEX committee without the direct benefit of Cinergy futures trading). The Cinergy spot market is

active because spot prices reported by PMW are based on actual transaction or trades. The Cinergy forward markets are active, as evidenced by the number of written contracts.

Third, the numerical differences between Cinegy forward prices and Cinergy future prices for the period from November 2000 to September 2001 are very small. Therefore the numerical differences provide no reason to object to preferring market-determined Cinergy forward prices over Cinergy future prices somehow determined by the NYMEX settlement committee.

Fourth, I recommend the actual Cinergy spot prices for July, August, September, and October 2000 because the best projection of a price is the known, actual price. And consistent with this change, I moved the month of the market-determined Cinergy forward prices from June 2000 to October 2000, such that the market-determined forward prices for the period from November 2000 to September 2001 includes information about the known, actual Cinergy spot prices of July, August, September, and October 2000.

Q. What are the effects of your recommended change with respect to a set of purchased power prices for a future 15 month period?

A. For the complete period of 15 months, Staff's recommended prices are below CILCO's recommended prices; the average price difference is -$8.94 per mWh, or -15.7%. However for the 11 month period from November 2000 to September 2001, Staff's recommended prices are slightly above CILCO's recommended prices; the average price difference is only $0.71 cents per mWh, or 1.4%. (ICC Staff Ex. 2.0,Schedule 1, p. 6)

Q. Does this conclude your testimony?

A. Yes.

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or *contract month*	NYMEX future prices $/mwh transaction date June 2000	forward** *** prices $/mwh transaction date June 2000	difference	
July 2000	$216.18	$182.34	-$33.84	
August 2000	$151.25	$175.56	$24.31	
September 2000	$41.75	$41.77	$0.02	
October 2000	$31.90	$30.85	-$1.05	
November 2000	$30.51	$30.85	$0.34	
December 2000	$31.94	$30.85	-$1.09	
January 2001	$38.64	$37.21	-$1.43	
February 2001	$36.34	$37.21	$0.87	
March 2001	$30.69	$31.05	$0.36	
April 2001	$31.48	$31.46	-$0.02	
May 2001	$39.20	$38.72	-$0.48	
June 2001	$68.41	$66.75	-$1.66	
July 2001	$138.48	$127.50	-$10.98	
August 2001	$118.48	$127.50	$9.02	
September 2001	$35.41	$38.11	$2.70	
AVERAGE	$69.38	$68.52	-$0.86	-1.2%

** weighted average for July 2000 forward contracts; weights are number of days contracted to deliver electricity
unweighted, the July 2000 forward contract price is $170.98 per mWh
*** forward prices for March, April, May, and September 2001 are interpolated or extrapolated
from trends of the set of June 2000 future prices because the forward and future prices are closely related:

June 1999 and 2000 transaction or trading months

	correlation between *future and forward* prices	regression coefficient (no intercept) *of forward prices* on future prices
daily transactions	0.969	0.959
monthly averages	0.982	0.964

SOURCE: Power Markets Week Price Index Database in Excel, November 2000

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or contract month	NYMEX future prices $/mwh transaction date October 2000	forward** prices $/mwh transaction date October 2000	difference	
November 2000	$27.26	$27.78	$0.52	
December 2000	$28.22	$28.24	$0.02	
January 2001	$34.65	$34.01	-$0.64	
February 2001	$33.20	$34.01	$0.81	
March 2001	$29.11	$30.39	$1.28	
April 2001	$29.35	$30.71	$1.36	
May 2001	$38.84	$38.91	$0.07	
June 2001	$70.60	$70.61	$0.02	
July 2001	$125.08	$124.79	-$0.29	
August 2001	$125.08	$124.79	-$0.29	
September 2001	$32.73	$32.57	-$0.16	
AVERAGE	$52.19	$52.44	$0.24	0.5%

** weighted average for November 2000 forward contracts; weights are number of days contracted to deliver electricity
unweighted, the November 2000 forward contract is $29.14 per mWh

October 1998, 1999, and 2000 transaction or trading months

	correlation between future and forward prices	regression coefficient (no intercept) of forward prices on future prices
daily transactions	0.999	0.998
monthly averages	0.999	0.997

SOURCE: Power Markets Week Price Index Database in Excel, November 2000

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FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

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delivery month or contract month	spot prices $/mwh	NYMEX future prices $/mwh transaction date June 2000	NYMEX future prices $/mwh transaction date October 2000	difference
July 2000	$38.75	$216.18		-$177.43
August 2000	$46.40	$151.25		-$104.85
September 2000	$23.47	$41.75		-$18.28
October 2000	$32.98	$31.90		$1.08

delivery month or contract month	spot prices $/mwh	NYMEX future prices $/mwh transaction date June 1999	NYMEX future prices $/mwh transaction date October 2000	difference
July 1999	$307.43	$100.50		$206.93
August 1999	$69.36	$91.70		-$22.34
September 1999	$20.15	$35.85		-$15.70
October 1999	$21.63	$25.61		-$3.98
November 1999	$19.91		$23.32	-$3.42
December 1999	$20.27		$24.41	-$4.14
January 2000	$26.62		$30.87	-$4.25
February 2000	$23.16		$27.69	-$4.53

delivery month or contract month	spot prices $/mwh	NYMEX future prices $/mwh transaction date June 1998 @	NYMEX future prices $/mwh transaction date October 2000	difference
November 1998	$20.32		$24.41	-$4.09
December 1998	$19.20		$26.43	-$7.24
January 1999	$21.55		$33.32	-$11.77
February 1999	$17.64		$31.83	-$14.19

@ Power Markets Week shows no NTMEX trading of Cinergy future contract prior to July 1998

SOURCE: Power Markets Week Price Index Database in Excel, November 2000 and historical database

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or contract month	spot prices $/mwh	forward** prices $/mwh transaction date June 2000	forward** prices $/mwh transaction date October 2000	difference
July 2000	$38.75	$182.34		-$143.59
August 2000	$46.40	$175.56		-$129.16
September 2000	$23.47	$41.77		-$18.30
October 2000	$32.98	$30.85		$2.13

** weighted average for July 2000 forward contracts; weights are number of days of delivery of electricity

delivery month or contract month	spot prices $/mwh	forward** prices $/mwh transaction date June 1999	forward** prices $/mwh transaction date October 2000	difference
July 1999	$307.43	$92.93		$214.50
August 1999	$69.36	$86.82		-$17.46
September 1999	$20.15	$36.42		-$16.27
October 1999	$21.63	$30.25		-$8.62
November 1999	$19.91		$23.23	-$3.32
December 1999	$20.27		$24.64	-$4.37
January 2000	$26.62		$29.25	-$2.63
February 2000	$23.16		$29.25	-$6.09

** weighted average for July and November 1999 forward contracts; weights are number of days of delivery of electricity

delivery month or contract month	spot prices $/mwh	forward prices $/mwh transaction date June 1998	forward prices $/mwh transaction date October 2000	differenence
July 1998	$148.63	$117.56		$31.07
August 1998	$39.10	$117.56		-$78.46
September 1998	$32.35	$43.80		-$11.45
October 1998	$19.65			
November 1998	$20.32		$24.49	-$4.17
December 1998	$19.20		$26.36	-$7.16
January 1999	$21.55		$33.24	-$11.69
February 1999	$17.64		$33.24	-$15.60

SOURCE: Power Markets Week Price Index Database in Excel, November 2000 and historical database

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or contract month	NYMEX future prices $/mwh transaction date June 19, 2000	CILCO deflated & averaged *future prices* $/mwh attachment CILCO Exh. 4.1 of Ferlmann's direct testimony and CILCO "Confidential" filing of July 31, 2000	difference	
July 2000	$200.00	$134.38	-$65.62	
August 2000	$130.00	$107.63	-$22.37	
September 2000	$40.50	$31.82	-$8.68	
October 2000	$33.95	$27.53	-$6.42	
November 2000	$33.15	$27.39	-$5.76	
December 2000	$34.15	$27.56	-$6.59	
January 2001	$41.25	$37.33	-$3.92	
February 2001	$39.25	$35.52	-$3.73	
March 2001	$31.75	$28.73	-$3.02	
April 2001	$32.25	$29.18	-$3.07	
May 2001	$37.25	$33.71	-$3.54	
June 2001	$64.00	$57.91	-$6.09	
July 2001	$134.00	$134.38	$0.38	
August 2001	$114.00	$107.63	-$6.37	
September 2001	$33.25	$31.82	-$1.43	
AVERAGE	$66.58	$56.83	-$9.75	-14.6%

SOURCE: Power Markets Week Price Index Database in Excel, November 2000, unless otherwise stated

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or contract month	CILCO deflated & averaged future prices $/mwh attachment CILCO Exh. 4.1 of Ferlmann's direct testimony and CILCO "Confidential" filing of July 31, 2000	ICC Staff recommended prices for future 15 months $/mwh	difference	
July 2000	$134.38	$38.75	-$95.63	
August 2000	$107.63	$46.40	-$61.23	
September 2000	$31.82	$23.47	-$8.35	
October 2000	$27.53	$32.98	$5.45	
November 2000	$27.39	$27.78	$0.39	
December 2000	$27.56	$28.24	$0.68	
January 2001	$37.33	$34.01	-$3.32	
February 2001	$35.52	$34.01	-$1.51	
March 2001	$28.73	$30.39	$1.66	
April 2001	$29.18	$30.71	$1.53	
May 2001	$33.71	$38.91	$5.20	
June 2001	$57.91	$70.61	$12.70	
July 2001	$134.38	$124.79	-$9.59	
August 2001	$107.63	$124.79	$17.16	
September 2001	$31.82	$32.57	$0.75	
AVERAGE	$56.83	$47.89	-$8.94	-15.7%
AVERAGE from November 2000 to September 2001	$50.11	$50.82	$0.71	1.4%

SOURCE:Schedule 1 of ICC Staff Exh. 1, page 7, unless otherwise stated

ON-PEAK PRICES
FOR THE DELIVERY OF ELECTRICITY TO THE INTO-**CINERGY** HUB

delivery month or contract month	ICC Staff recommended prices for future 15 months $/mwh	
July 2000	$38.75	Cinergy spot price
August 2000	$46.40	Cinergy spot price
September 2000	$23.47	Cinergy spot price
October 2000	$32.98	Cinergy spot price
November 2000	$27.78	*Cinergy forward price as of October 2000***
December 2000	$28.24	Cinergy forward price as of October 2000
January 2001	$34.01	Cinergy forward price as of October 2000
February 2001	$34.01	Cinergy forward price as of October 2000
March 2001	$30.39	Cinergy forward price as of October 2000
April 2001	$30.71	Cinergy forward price as of October 2000
May 2001	$38.91	Cinergy forward price as of October 2000
June 2001	$70.61	Cinergy forward price as of October 2000
July 2001	$124.79	Cinergy forward price as of October 2000
August 2001	$124.79	Cinergy forward price as of October 2000
September 2001	$32.57	Cinergy forward price as of October 2000
AVERAGE	$47.89	

** weighted average for November 2000 forward contracts; weights are number of days contracted to deliver electricity

SOURCE: Power Markets Week Price Index Database in Excel, November 2000

WRITTEN CONTRACTS
FOR THE DELIVERY OF ON-PEAK ELECTRICITY TO THE INTO-**CINERGY** HUB

	Number of NYMEX **future contract** transactions reported for month of **June 2000**				
delivery month or contract month	open interest#	change of open interest	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
July 2000	22	0	0	0	0
August 2000	25	0	0	0	0
September 2000	25	0	0	0	0
October 2000	0	0	0	0	0
November 2000	0	0	0	0	0
December 2000	0	0	0	0	0
January 2001	0	0	0	0	0
February 2001	0	0	0	0	0
March 2001	0	0	0	0	0
April 2001	0	0	0	0	0
May 2001	25	0	0	0	0
June 2001	0	0	0	0	0
July 2001	0	0	0	0	0
August 2001	0	0	0	0	0
September 2001	0	0	0	0	0
TOTAL	97	0	0	0	0

number of written contracts outstanding
number of days high price of written contracts does not equal the low price of written contracts
number of days high price of written contracts equals the low price of written contracts
2 times (days with two or more contracts written) + (number of days with one contract written)

SOURCE: Power Markets Week Price Index Database in Excel, November 2000

WRITTEN CONTRACTS
FOR THE DELIVERY OF ON-PEAK ELECTRICITY TO THE INTO-**CINERGY** HUB

	Number of **forward contract** transactions reported for month of **June 2000**			
delivery month or contract month	number of days with only bid/ask quotes	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
July 2000	9	7	13	27
August 2000	8	1	8	10
September 2000	0	15	3	33
October 2000	1	3	7	13
November 2000	1	3	7	13
December 2000	1	3	7	13
January 2001	0	2	12	16
February 2001	0	2	12	16
March 2001	0	0	0	0
April 2001	0	0	0	0
May 2001	0	0	0	0
June 2001	0	0	4	4
July 2001	0	3	0	6
August 2001	0	3	0	6
September 2001	0	0	0	0
TOTAL	20	42	73	157

number of written contracts outstanding
number of days high price of written contracts does not equal the low price of written contracts
number of days high price of written contracts equals the low price of written contracts
2 times (days with two or more contracts written) + (number of days with one contract written)

SOURCE: Power Markets Week Price Index Database in Excel, November 2000

WRITTEN CONTRACTS
FOR THE DELIVERY OF ON-PEAK ELECTRICITY TO THE INTO-**CINERGY** HUB

Number of NYMEX future contract transactions reported for month of **October 2000**

delivery month or contract month	open interest#	change of open interest	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
November 2000	0	0	0	0	0
December 2000	0	0	0	0	0
January 2001	0	0	0	0	0
February 2001	0	0	0	0	0
March 2001	0	0	0	0	0
April 2001	0	0	0	0	0
May 2001	25	0	0	0	0
June 2001	0	0	0	0	0
July 2001	0	0	0	0	0
August 2001	0	0	0	0	0
September 2001	0	0	0	0	0
TOTAL	25	0	0	0	0

Number of NYMEX future contract transactions reported for month of **September 2000**

delivery month or contract month	open interest#	change of open interest	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
October 2000	0	0	0	0	0
November 2000	0	0	0	0	0
December 2000	0	0	0	0	0
January 2001	0	0	0	0	0
February 2001	0	0	0	0	0
March 2001	0	0	0	0	0
April 2001	0	0	0	0	0
May 2001	25	0	0	0	0
June 2001	0	0	0	0	0
July 2001	0	0	0	0	0
August 2001	0	0	0	0	0
September 2001	0	0	0	0	0
TOTAL	25	0	0	0	0

Number of NYMEX future contract transactions reported for month of **August 2000**

delivery month or contract month	open interest#	change of open interest	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
September 2000	25	0	0	0	0
October 2000	0	0	0	0	0
November 2000	0	0	0	0	0
December 2000	0	0	0	0	0
January 2001	0	0	0	0	0
February 2001	0	0	0	0	0
March 2001	0	0	0	0	0
April 2001	0	0	0	0	0
May 2001	25	0	0	0	0
June 2001	0	0	0	0	0
July 2001	0	0	0	0	0
August 2001	0	0	0	0	0
September 2001	0	0	0	0	0
TOTAL	50	0	0	0	0

Number of NYMEX future contract transactions reported for month of **July 2000**

delivery month or contract month	open interest#	change of open interest	number of days with two or more contracts written##	number of days with one contract written###	minimum number of contracts written####
August 2000	25	0	0	0	0
September 2000	25	0	0	0	0
October 2000	0	0	0	0	0
November 2000	0	0	0	0	0
December 2000	0	0	0	0	0
January 2001	0	0	0	0	0
February 2001	0	0	0	0	0
March 2001	0	0	0	0	0
April 2001	0	0	0	0	0
May 2001	25	0	0	0	0
June 2001	0	0	0	0	0
July 2001	0	0	0	0	0
August 2001	0	0	0	0	0
September 2001	0	0	0	0	0
TOTAL	75	0	0	0	0

number of written contracts outstanding
number of days high price of written contracts does not equal the low price of written contracts
number of days high price of written contracts equals the low price of written contracts
2 times (days with two or more contracts written) + (number of days with one contract written)
SOURCE: Power Markets Week Price Index Database in Excel, November 2000

WRITTEN CONTRACTS
FOR THE DELIVERY OF ON-PEAK ELECTRICITY TO THE INTO-**CINERGY** HUB

	Number of **forward contract** transactions reported for month of **October 2000**			
delivery month or contract month	*number of days* with only bid/ask quotes	*number of days* with two or more contracts written##	*number of days* with one contract written###	*minimum* number of contracts written####
November 2000	0	28	2	57
December 2000	0	19	1	44
January 2001	0	15	6	36
February 2001	0	15	6	36
March 2001	0	2	6	10
April 2001	0	1	6	8
May 2001	0	5	6	18
June 2001	0	4	8	15
July 2001	1	3	7	13
August 2001	2	3	7	7
September 2001	2	2	1	4
TOTAL	5	97	56	248

number of written contracts outstanding
number of days high price of written contracts does not equal the low price of written contracts
number of days high price of written contracts equals the low price of written contracts
2 times (days with two or more contracts written) + (number of days with one contract written)

SOURCE: Power Markets Week Price Index Database in Excel, November 2000